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Industry News

President Bush Views Energy Exhibits

President Bush visited the Department of Energy on June 28 and viewed energy exhibits in the Forrestal Building, including a Capstone MicroTurbine™. Dr. Ake Almgren, President and CEO of Capstone, spoke with the President and Secretary Abraham about the technology and showed the President photographs of Capstone's MicroTurbines™ in use around the world. A Plug Power fuel cell and Powercell "PowerBlock," were also on exhibit. The PowerBlock is an energy storage device capable of delivering 100kW for one hour. As Reznor Orr, CEO of Powercell explained, this system can provide instantaneous power for a digital industry during an electricity outage. It can also be used to shave peaks during maximum demand. "Working with companies like yours to increase the energy security of the country makes my job much easier" said the President. President Bush gave a speech during the event, in which he announced \$85.7 million in Federal grants that will be issued for research and development of fuel cells, hydrogen, advanced engines, and other energy efficient technologies. [Capstone Press Release](#) and [Photo: White House Press Release](#), June 28



LIPA to Connect 75 Fuel Cells to Grid

The Long Island Power Authority (LIPA) has announced it will purchase 75 fuel cells from [Plug Power, Inc.](#), and connect the units to its electric grid at its West Babylon substation. The fuel cells will cost approximately \$7 million, and construction is expected to start in July. The systems are being funded through LIPA's Clean Energy Initiative and are part of a program designed to demonstrate how fuel cell technology may ultimately generate electricity for residential customers. LIPA also plans to use the opportunity to study how fuel cells may

operate in parallel with, and contribute to the reliability of, the electrical grid system. Testing on the fuel cells is expected to last 18 months. [LIPA Press Release](#), June 27

Chicago Field Museum Powered by Solar Energy

Spire Corporation, a provider of solar electric systems for distributed power generation, has installed a solar electric system on the roof of Chicago's Field Museum of Natural History. The system is capable of delivering 60,000 kWh annually with maximum sunlight and is the largest solar electric system in Illinois. The Field Museum project is part of a multi-year, multi-site program that Spire is completing with the City of Chicago, Commonwealth Edison, and the Illinois Department of Commerce and Community Affairs. Installation of 15 more solar powered systems this year is being planned for Chicago public schools, museums, and commercial buildings. [Spire Corporation Press Release](#), June 21

Greenvolt Power Announces PAFC-200

[Greenvolt Power Corporation](#) announced it is preparing its GVL/PAFC-200 for power plant delivery next month. The 200 kW phosphoric acid fuel cell (PAFC) unit weighs 30 tons and is fueled by natural gas and air, operating at an overall efficiency of approximately 80 percent. According to Greenvolt, the unit is fully automated, self-contained, and housed for outdoor installation. It runs for about 30,000 continuous hours before needing a stack replacement and is virtually silent. [Fuel Cells Today](#), June 26

1,000 Solar Powered Homes Planned for CA

[AstroPower, Inc.](#), has been selected by [US Home](#), a national home building company, to supply a minimum of 500 solar electric home power systems for new home construction scheduled to begin in 2003. AstroPower's systems will be offered as a standard feature in US Home's Brickford Ranch community located near Sacramento. If the company meets its goal of 1,000 solar-powered houses in Brickford Ranch, which will eventually include 1,880 single-family homes, it would make it the world's largest community of single-family grid-connected solar powered homes. [EREN Network News](#) and [AstroPower, Inc., Press Release](#), June 27

FPL Starts Operation of Wisconsin Wind Farm

FPL Energy announced on June 25 that its 30 MW Montfort Wind Farm located east of Madison, Wisconsin, is now in operation. According to the company, it is the largest wind facility in the state and consists of twenty 1.5 MW Enron turbines. Electricity generated at the site is being sold to

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According to the Index of Investor Optimism, investors are divided over how to solve the nation's energy problems.*

Wisconsin Electric-Wisconsin Gas and Alliant Energy-Wisconsin Power and Light. FPL has four more wind projects underway, which will add approximately 850 MW to its portfolio by the end of this year. [FPL Press Release](#), June 25; *Electricity Daily*, June 29



Policy News

DER Legislation Introduced in the House

Several bills related to distributed energy resources and renewable energy have been introduced in the U.S. House of Representatives this month.

- Residential Solar Energy Tax Credit Act, H.R. 2076, introduced by Congressman Hayworth (R-AZ)
- Energy Security and Tax Incentive Policy Act of 2001, H.R. 2108, introduced by Congressman Matsui (D-CA)
- Robert S. Walker and George E. Brown, Jr., Hydrogen Energy Act of 2001, H.R. 2174, introduced by Congressman Calvert (R-CA)
- Renewable Energy Act for Credit on Taxes, H.R. 2179, introduced by Congresswoman Davis (D-CA)
- Preserving Our World's Energy and Resources Act of 2001, H.R. 2184, introduced by Congressman Engel (D-NY)
- Renewable Energy Production Incentive Reform Act, H.R. 2190, introduced by Congresswoman McCarthy (D-MO)
- A bill to assist municipalities and local communities to explore and determine options for the alternative provision of electricity...H.R. 2233, introduced by Congressman Nadler (D-NY)

Promotion of Hydrogen Use in Hawaii

Governor Benjamin Cayetano signed Senate Bill 1435 that establishes a hydrogen private/public partnership within the State of Hawaii's Department of Business, Economic Development to support and promote hydrogen use in Hawaii's energy economy. The Hawaii Natural Energy Institute of the University of Hawaii will provide assistance to the Department. Participation from the state, counties, Federal government, utilities, and private sector will be sought in the partnership. \$200,000 is appropriated for fiscal year 2001-2002 with a matching requirement to support hydrogen research and development efforts.



DOE News

DOE Awards Grants for EE, Science Research

On June 25 and June 28, Secretary Abraham announced Department of Energy awards for cost-shared financial assistance to fund new research in fuel cells. The June 25 announcement included three companies in Massachusetts receiving \$17.9 million in financial assistance, including Nuvera Fuel Cells; Mechanology, LLC; and Arther D. Little, Inc. The awards announced on June 28 include grants amounting to \$85.7 million that will be given to 18 organizations and five universities to conduct research on



By the Numbers

Venture Capital (VC) Investment within the Energy Sector

VC funding for energy-related businesses :

\$50 million — 1995

\$400 million — 1997

\$1.5 billion — 2000

DG companies receiving VC funding:

Capstone Turbines — \$260 million

Metallic Power — \$27 million

Evergreen Solar — \$18 million

ENCORP — \$3.3 million

Source: DG Insight, June 2001 (cited in Business Wire, June 25)

energy efficiency projects, including fuel cell, hydrogen and engine technologies. Recipient organizations include 3M, DeNora North America, International Fuel Cells, Superior MicroPowders, Porvair Corporation, Catalytica Energy Systems, University of Michigan, Honeywell, Society of Automotive Engineers, Breakthrough Technology Institute, Caterpillar, Inc., United Technologies, University of Kentucky, Southwest Research Institute, Air Products and Chemicals, Inc., GE-Energy & Environmental Research Corporation, Gas Technology Institute, University of Wisconsin, University of California, Pennsylvania State University, University of Missouri, and Virginia Polytechnic Institute and State University. DOE press releases on each announcement are available at www.energy.gov/press/sub/hqreleases.html.

2001 Congressional Fuel Cell Expo

The U.S. Fuel Cell Council sponsored the 2001 Congressional Fuel Cell Exposition held June 26 on Capitol Hill. The Department of Energy (DOE), American Institute of Chemical Engineers, American Society of Mechanical Engineers, and National Hydrogen Association also supported the event. Representative Nancy Johnson (R-CT, sponsor of H.R. 1275) was the Congressional sponsor, and Secretary Abraham provided welcoming remarks at the event. The Secretary stated that the Administration is committed to educating the public on fuel cell technology and hydrogen and will pursue fuel cell projects on DOE property. More than 40 exhibitors featured stationary and vehicular fuel cell technologies.

EERE Continues Public Meetings

During the past two weeks the Office of Energy Efficiency and Renewable Energy (EERE) continued its series of public meetings in Atlanta, Boston, Denver, Philadelphia, Seattle, and Washington, DC. Department of Energy Headquarters representatives taking comments in Washington, DC, included David Garman, Assistant Secretary for EERE; Denise Swink, Deputy Assistant Secretary (DAS) for the Office of Industrial Technologies; Robert Dixon, DAS for the Office of Power Technologies; Richard Moorner, Associate DAS for the Office of

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Of those surveyed, 34% favor exploration and production of more oil, gas and coal supplies; and 39% prefer conservation. A combination of both approaches was supported by 21%.*



USCHPA Policy Day Workshop Highlights Air Quality, Interconnection, and Stand-by Rate Issues

The U.S. Combined Heat and Power Association (USCHPA) hosted a policy day workshop June 27 in Washington, DC, that included morning leadership meetings, a press conference, luncheon, and afternoon workshop sessions.

During the press conference, the USCHPA, the Distributed Power Coalition of America (DPCA), and the American Gas Cooling Center (AGCC) announced the formation of a new alliance—the Energy Solutions Alliance—formed to seek the enactment of policies needed to support distributed energy and combined heat and power (CHP). The group plans to advocate for state and Federal actions to help implement CHP, distributed power, and other thermally efficient systems into more customer facilities. Richard Brent, USCHPA Chairman; Daniel Dessanti, DPCA Chairman; Richard Morrow, AGCC Chairman and Vice President; and John Jimison, USCHPA Executive Director, provided comments and answered questions on policy initiatives.

David Garman, Assistant Secretary for the Office of Energy Efficiency and Renewable Energy, and Rob Brenner, Acting Assistant Administrator for the Environmental Protection Agency (EPA), provided keynote presentations during the luncheon. Mr. Garman discussed DOE's support for CHP,

including the Department's dedication to demonstrating leadership in achieving the CHP vision of doubling capacity by 2010 and its need to work with the EPA and the Department of Treasury to address regulatory and institutional CHP barriers.



Richard Brent; David Garman; Joel Anderson, BCHP Chair; and Merrill Smith, CHP Program Manager, DOE

Afternoon workshop sessions focused on state and local air quality policies, interconnection and working with local distribution companies, and stand-by and back-up rate conditions. Panelists included Ken Colburn, New Hampshire Air Resources Division; Louis Harris, Edison Electric Institute; Joe Nipper, American Public Power Association; and Charles Gray and Andrew Spahn, National Association of Regulatory Utility Commissioners. Responses from various CHP representatives were given after the panelists' presentations.

After the workshop, the USCHPA hosted a congressional reception at the U.S. Capitol, with remarks by members of Congress in support of CHP-related legislation.

Transportation Technologies; and Mark Ginsberg, DAS for the Office of Building Technologies. Representatives from associations, councils, universities, private businesses, and coalitions provided oral comments. Local media reported that speakers and protesters at the various locations called on the Administration to increase support for conservation and renewable energy resources.

Congressional Wind Energy Briefing

On June 27, a Congressional briefing on wind energy was held in the Russell Senate Office Building in Washington, DC. Senators Wayne Allard (R-CO) and Byron Dorgan (D-ND), and Congressmen Wayne Gilchrest (R-MD) and Howard Berman (D-CA) co-hosted the event, along with the House and Senate Renewable Energy and Energy Efficiency Caucuses, Global Legislators Organization for a Balanced Environment, and the Environmental and Energy Study Institute. Senator Dorgan, Co-Chair of the Senate Renewable Energy and Energy Efficiency Caucus, was the keynote speaker. The briefing provided information on wind energy technology and its benefits to the environment, the energy sector, and the economy, as well as a look at Europe's wind energy market. The expert panel of speakers also included Dr. Robert Dixon, Deputy Assistant Secretary, Office of Power Technologies, U. S. Department of Energy; Hap Boyd, Vice President, Enron Wind Corporation; Lester Brown, President, Earth Policy

Institute; and Bernd Kramer, Counselor, Office of Science, Technology and Environment, German Embassy.

EEI Distributed Generation Task Force Meeting

Richard DeBlasio, National Renewable Energy Laboratory (NREL), attended the Edison Electric Institute's (EEI) Distributed Generation (DG) task force meeting in Milwaukee, Wisconsin, from June 20-21. The meeting focused on future challenges regarding DG development, rate regulation, strategic planning, and distribution. Discussion topics included market penetration studies, real options and valuation, ratemaking, research on DG, state activities on interconnection standards and rate cases, and pending Federal legislation that could effect interconnection, right to back-up power, net metering, retail supplier, limitations, and large units. Mr. DeBlasio summarized Department of Energy and NREL activities addressing utility regulatory barriers to DG and the status of the IEEE P1547 interconnection standard.

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Regional Office News

SRO Participates in "One City Block" Event

Philips Lighting Company will be re-fitting every business and residence on one city block in Berkeley, California, with energy-efficient light bulbs to find out how much can be saved. Seattle Regional Office (SRO) Regional Partnership Team Leader Paul Johnson joined the City of Berkeley, the Office of Governor Davis, Mayor Dean and the Berkeley City Council, Lawrence Berkeley National Laboratory, Philips Lighting Company, Amtech Lighting, WESCO, and Earth Protection Services for a ceremony and press conference on June 26 to unveil the projected savings and impact that will result from this change over. This topic will also be addressed on a national level by projecting the potential savings in other major cities across the country that could soon be affected by the current energy crisis.

Energy Efficient Building Preview

Duke Solar and the City of Charleston, South Carolina, hosted a preview of an energy efficient commercial building scheduled to open in July in Charleston. The Atlanta Regional Office was represented at the unveiling of the building, which is expected to save 30 to 40 percent in energy bills and reduce carbon dioxide emissions by as much as 86 tons per year. The design incorporates energy saving features and technologies, most notably the Power Roof system, an evacuated-tube concentrating solar system that produces 12 kW of peak electricity, space heating, and hot water for the building. The Power Roof system is integrated into the existing roof layout and produces fluid temperatures up to 400 degrees Fahrenheit—the highest temperature of any fixed array system in the world. During the event, Robert Dixon, Deputy Assistant Secretary for Power Technologies in the Office of Energy Efficiency and Renewable Energy, discussed the importance of clean reliable power systems and the research conducted at DOE laboratories to meet the nation's demand for energy.

CRO Attends Conference of Mayor's Meeting

The Energy and Environment Committee of the U.S. Conference of Mayors held a meeting at their national conference in Detroit, Michigan on June 22. The meeting was held to consider a number of pending resolutions and to release a report prepared through the Office of Chicago Mayor Richard Daley, the *Best Practices for Successful City Energy Initiatives*. Peter Dreyfuss, Chicago Regional Office Director, attended the meeting and represented the Office of Energy Efficiency and Renewable Energy. The Committee adopted a resolution on the National Energy Policy, which included a call for the development of local energy plans that would target an "immediate minimum reduction of energy consumption of 10%," increasing supply including renewable energy resources; responding to low-income needs; addressing the issues of the national transmission grid; and creating a national clearinghouse for "Best Energy Practices." The resolutions were presented to the full organization for adoption. The best practices booklet will be posted on the Conference of Mayors website in the near future.

MA Bioenergy Working Group Meeting

The inaugural Massachusetts bioenergy working group meeting was held on June 21, and the Boston Regional Office Bioenergy Project Officer attended. Key issues discussed during the meeting included the general goals of the working group, the goals for the first year, and a briefing by the Massachusetts DOER Commissioner on the Massachusetts Renewable Portfolio Standard. The meeting ended with an information-sharing session regarding bioenergy issues in the state, as well as ideas about the future direction of the working group. Outcomes of the meeting included the formation of three subgroups to address issues specific to Massachusetts regarding bioenergy supply, bioenergy demand, and technologies and emissions. These subgroups will meet again during the summer. The next Massachusetts bioenergy working group meetings are scheduled for September 11 and October 23.



CALENDAR OF EVENTS

JULY 2001

9-13	4th International Symposium on New Materials for Electrochemical Syst.	Montreal, Quebec	www.newmaterials.polymtl.ca/eng/congres
10-12	Gas Storage Workshop	Kingston, Ontario	David Quinn; quinn-d@rmc.ca
11-12	FuelCell Investor Conference	Portland, OR	www.srinstitute.com/cr201 , or 800-666-8514
16-19	2001 National Workshop on State Building Energy Codes	Burlington, VT	www.eren.doe.gov/buildings/codes_standards/buildings/2001natl_workshop.html
24-27	ACEEE Summer Study	Tarrytown, NY	www.aceee.org ; Rebecca Lunetta; 302-292-3966
30 - Aug. 1	Green Power Conference	Portland, OR	Tina Kaarsberg, tina.kaarsberg@ee.doe.gov ; megan_maguire@nrel.gov

*Source: Index of Investor Optimism, UBS PaineWebber, Inc., and Gallup Organization, www.ubspainewebber.com.



CALENDAR OF EVENTS

AUGUST 2001

11-15	NCSL Annual Meeting and Exhibition	San Antonio, TX	www.ncsl.org
21-24	International Energy Program Evaluation Conference	Salt Lake City, UT	608-835-6880; marymcc@tds.net
29-30	Integrated Energy Efficiency Conference and Facilities Management and Maintenance Expo	Cleveland, OH	www.aeecenter.org
29-Sep. 3	IEEC Integrated Energy Efficiency Congress	Cleveland, OH	Sponsored in part by FEMP; www.aeecenter.org

SEPTEMBER 2001

9-12	MicroGeneration to PowerParks: Supply options and regulatory challenges for RE and DG techs.	Troy, MI	Great Lakes Renewable Energy Assn. www.glrea.org
9-14	6th International Conference on Carbon Dioxide Utilization	Breckenridge, CO	Barbara Ferris, 303-275-3781; www.nrel.gov/iccduvi/
11-13	7th Grove Fuel Cell Symposium	London, UK	www.grovefuelcell.com
16-19	NASEO Annual Meeting	Portland, ME	www.naseo.org/events/annual/default.htm
17-21	Fifth Biomass Conference of the Americas	Orlando, FL	www.fsec.ucf.edu/bioam ; dee_scheaffer@nrel.gov
24-26	Powering the Future—New Strategies and Solutions for Deploying Distributed Power in the Marketplace	Chicago, IL	www.intertechusa.com
30 – Oct. 5	UPEX'01: The Photovoltaic Experience Conference & Exhibition	Sacramento, CA	Jjudd@ttcorp.com; hosted by Sacramento Municipal Utility District; includes distributed energy technologies workshop

OCTOBER 2001

2-3	Midwest Electrical Conference and Expo	Indianapolis, IN	George Howell 800-676-2136, www.electricleagueindiana.org/expo2001/index.htm
14-17	National Center for Photovoltaics Program Review	Lakewood, CO	barbara_ferris@nrel.gov, 303-275-3781
24-26	World Energy Engineering Congress	Atlanta, GA	www.agcc.org (includes CHP Expo www.aeecenter.org)
24-27	Excellence in Building 2001	Orlando, FL	www.eeba.org/conference

NOVEMBER 2001

1-4	World Congress for a Hydrogen Economy	Denver, CO	www.hydrogennow.org
11-14	113th NARUC Annual Convention	Philadelphia, PA	www.naruc.org
12-14	Fuel Cells for Stationary, Automotive and Portable Apps.	Fort Lauderdale, FL	Florida Educational Seminars, (561) 367-0193